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CHILD

SYNOPSIS

CHILD LABOR IS a major threat to the health of children in the United States. The U.S. Department of Labor estimates that more than four million children are legally employed and that another one to two million are employed under illegal, often exploitative conditions. Across the United States, child labor accounts for 20,000 workers compensation claims, 200,000 injuries, thousands of cases of permanent disability, and more than 70 deaths each year. Agriculture and newspaper delivery are the two most hazardous areas of employment for children and adolescents.

Poverty, massive immigration, and relaxation in enforcement of Federal child labor law are the three factors principally responsible for the last two decades' resurgence of child labor in the United States. Control of the hazards of child labor will require a combination of strategies including vigorous enforcement, education, and public health surveillance.

Child labor. The grim words conjure up visions of Charles Dickens and of soot-laden workhouses in Victorian London^{1,2} or, closer to home, pictures of little children in the early 1900s sorting coal in the mines of Pennsylvania (Ed. note: See inside back cover) and West Virginia.³ This is the image most Americans have of child labor in this country. It is accompanied by the belief that the practice was evil but that it existed long ago and the problem has been remedied.

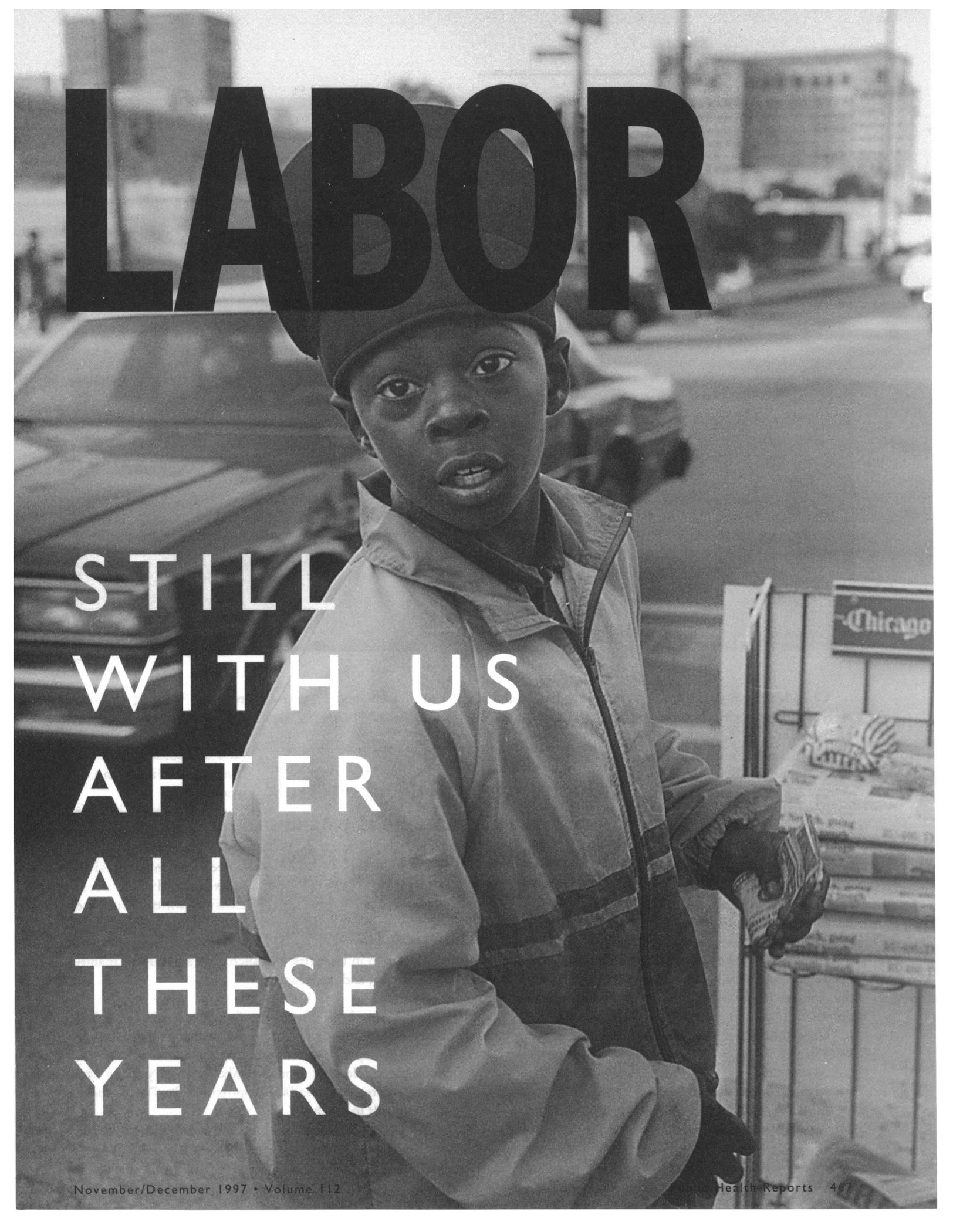
Most Americans today believe that exploitative child labor is a problem mainly of the developing world and that if it exists at all in the United States it is an isolated phenomenon found only at the far fringes of society, affecting highly marginalized groups such as migrant farmworker children, the children of deaf Mexicans in New York City who sold trinkets on the subways, or workers from Thailand imprisoned in a factory in California. Unfortunately, this view is far from accurate.

Child labor—in both its legal and illegal forms—is widespread in the United States and needs to be reexamined. Modern child labor has positive as well as negative aspects. On the plus side, legal work such as babysitting, grocery bagging, lawn work, and odd jobs can encourage the development of discipline, teach a child or teen the meaning of money, and provide valuable role models. But on the negative side, exploitative and illegal child labor is as ugly now as it was a hundred years ago. You just need to know where to look.

I first became aware of the problem of child labor a few years ago when Ernest Drucker, MD, of the Albert Einstein School of Medicine told me the horrifying tale of two adolescent boys in New York City who, within approximately six months, had both suffered high amputations of their arms while working in the same butcher shop. In each instance, the boy was cutting heavy sides of beef on an unguarded power-driven bandsaw. Each slipped on the blood-wet floor and fell into the moving saw. Other examples of illegal child labor include the child doing industrial piecework at home in the evening and then falling asleep the next day at school; the teenager delivering pizzas becoming involved in a car crash while driving illegally and trying to deliver food within a 30-minute deadline; and the four-year-old working under her mother's skirts in a garment factory passing along the fabric so that the piecework can go faster.

David Parker

LABOR



STILL
WITH US
AFTER
ALL
THESE
YEARS



David Parker

Child labor is found in every region of the nation and in every sector of society.⁴ According to data from the U. S. Department of Labor, more than four million children younger than 18 years of age worked in paid employment outside the home in 1993.⁵ Illegal child labor, defined as working under age, for long hours, at less than minimum wage, or on dangerous and prohibited machinery, is also widespread, and has recently stabilized after increasing through the 1980s into the 1990s. Detected violations of child labor law in the United States have more than doubled in the past decade.⁶⁻⁸

Data collected in 1993 highlight the following child labor facts:⁹

- Forty-two percent of 16- and 17-year-olds reported in 1993 that they had been employed at some time during the previous year.

Exploitative and illegal child labor is as ugly now as it was a hundred years ago, but you need to know where to look for it.

- Sixteen- and 17-year-olds reported working an average of 24 hours per week for 25 weeks of the year.

- By high school graduation, 80% of adolescents in the United States have worked.

- The most common jobs for children and adolescents are in restaurants, grocery stores, farms, nursing homes, and factories.

- Low-income teens are more likely than their higher-income peers to be

employed in high risk jobs such as in agriculture, manufacturing, and construction.

Work has been documented to account for 64,000 annual emergency room visits by children and adolescents.¹⁰ From these reports we estimate that the actual numbers of child and adolescent workers injured each year in the United States is 200,000. Approximately 70 of those injuries result in deaths.¹⁰

Work is clearly an increasingly important part of the life

of American children. Some recent case histories from the files of the Massachusetts Department of Public Health and the Colorado Department of Public Health and Environment show us why we should be paying more attention to this growing segment of the working population.

Death of a 17-year-old exposed to perchloroethylene. On February 3, 1994, a 17-year-old child laborer in Colorado began work at 4:00 P.M. in a plastic products manufacturing plant. His assigned task was to clean the insides of metal molds used to form plastic containers. He performed this task by soaking perchloroethylene solvent into a cloth rag. He then used the wet rag to wipe the interior surface of the mold. The mold in which he was working was a 40-gallon container that was 19½ inches in diameter and 32 inches deep.

In the moments before he was overcome and asphyxiated, the boy had propped the mold so that the open side faced up and had then leaned into the mold to clean the bottom. His body was found at the bottom of the mold at midnight when a co-worker arrived on the scene.

The autopsy report listed the cause of death as consistent with asphyxiation due to exposure to toxic vapors. A postmortem toxicologic screen of his blood showed a perchloroethylene concentration of 23.24 mg per liter. This level is far above the biological exposure index established by the American Conference of Governmental Industrial Hygienists for perchloroethylene in blood of 1 mg per liter.

The reconstruction of events indicated that the depth of the mold was greater than the boy's arm length. Thus, to reach the bottom of the mold, he had to bend deeply over the rim and place his head inside the mold. The space was not ventilated. There was no designated standby person. The worker was not wearing a respirator. And, finally, it was not legal for this 17-year-old boy to be working alone at night.

Electrocution of Colorado farmworkers. Aluminum irrigation pipes are generally 30 feet in length. The pipes are connected to a pump located in the center of the area to be irrigated. High voltage lines (7200 or 7620 volts), suspended 20 feet above the ground on poles, supply power to the pump.

Every year, several agricultural workers in arid climate zones are electrocuted when they contact overhead high voltage lines with aluminum irrigation pipes that they are lifting. Between 1982 and 1989, 34 such deaths were reported to state health departments in the western United States, according to the Colorado Department of Health and Environment.¹¹

In May 1990 in Colorado, three teenage migrant farmworkers were attempting to move a 30-foot section of aluminum irrigation pipe. A 15-year-old was kneeling on the ground and anchoring one end of the pipe while the other two lifted the pipe. The pipe made contact with the 7200-volt power line, and the 15-year-old worker was fatally electrocuted. The other two child laborers sustained serious electrical burns to their hands and feet.

Electrocution of a 15-year-old carwash worker. In September 1995, a 15-year-old boy working at an automated full service carwash in Colorado was instructed to remove a defective motor from the carwash machine. This motor operated spinning brushes and was powered by 460 volts of electricity. It appears that the manager disconnected the wires supplying power to the motor but that power to the circuit was not de-energized. Then, while the teenager was following instructions to remove the motor, the carwash equipment was re-energized and an electrical short circuit occurred. The 15-year-old was electrocuted.

Deaths of newspaper carriers in Massachusetts. During a six-month period, two Massachusetts news carriers, employed by different newspapers, were killed by motor vehicles while delivering their papers from bicycles. Neither child was wearing a helmet. Although safety materials were handed out during orientations, neither employer had a comprehensive safety program for their carriers. One employer offered a reflective vest and armband, but, according to several of the carriers' families, this equipment was not provided consistently.

Federal child labor law does not apply to news carriers because they are considered to be independent contractors. News carriers in Massachusetts, unlike other working minors, are not required to obtain work permits before they begin employment. Instead, all that is necessary is a written statement of permission from a parent or guardian. Moreover, only one of the two employers required parental permission and actively involved parents in the child's employment.

The first victim was a 14-year-old boy who had delivered newspapers for approximately 15 months. He would pick up newspapers from a distribution vehicle at a drop-off point less than one block from a busy suburban street. The boy crossed the street each day on his bicycle to pick up his papers.

On the day of his death, the boy was en route to the drop-off point and was about to cross the street on his bicycle when he was hit by a van. He was wearing a stadium jacket with a large thick hood that may have blocked his peripheral vision. Apparently the side mirror of the van struck the child on the back of the neck. The impact threw him from the bike. The boy suffered two head injuries, one from the impact of the mirror, the other from his fall to the ground. He died of severe brain trauma.

The second victim was a 12-year-old girl who had delivered newspapers for approximately six months. Her route consisted of 29 customers on two streets. The girl had just made a delivery and was coming out of a customer's driveway on her bicycle when she was struck by a jeep. She was wearing a reflective vest and a white jacket but no helmet. The driveway was steep and was lined with a row of five tall pine trees that obstructed the view from the street. The girl died from blunt head trauma one hour after being hit.

Why Has Child Labor Increased in the Last 15 Years?

A reconvergence of economic and social factors similar to those that produced the major increases in child labor at the beginning of the Industrial Revolution has produced the last two decades' increase in prevalence of child labor.⁴

Increased child poverty. More American children live below the poverty line today than 20 years ago. For those American children who live in poverty, financial need constitutes a compelling reason to seek employment.

Massive immigration. More immigration into the United States has occurred in the decades of the 1980s and 1990s than in any period in this century except the decade between 1900 and 1910. Illegal immigrants, particularly children without parents, are highly vulnerable to exploitation in the workplace.⁸ The recent surge of immigration has led to the reemergence of illegal immigrant sweatshops in large cities such as New York, Chicago, and Los Angeles.⁶⁻⁸

Growing frequency of student workers.⁹ Student workers are a phenomenon unique to North America. These children and adolescents, employed after school, on weekends, and during vacation are employed in all industrial sectors, but especially in the fast-food and service industries.

Relaxation in enforcement of Federal child labor law.

Since 1980, there has been lax enforcement of the Federal law, including relaxation of the provisions limiting the maximum permissible hours of work and the prohibitions against use of dangerous machinery. Repeal of the ban on industrial homework, which was created 40 years ago to protect working women and children from exploitation in piecework industries, has further undermined the historic intent of child labor law. There are now fewer than 1000 Federal labor inspectors for 113 million workers.

Illegal employment of children occurs today in all industrial sectors in the United States. Sweatshop conditions are increasingly common.⁶⁻⁸ A sweatshop is defined as any establishment that routinely and repeatedly violates wage, hour, and child labor laws as well as the laws protecting occupational safety and health. Traditionally, these shops have been considered fringe establishments, such as those in the garment and meat-packing industries. Increasingly, however, restaurants and grocery stores, not typically considered sweatshops, are also meeting the definition.

Health and safety conditions in sweatshops are often very poor.¹² Fire hazards may be created by blocked exit

doors, accumulations of combustible materials, and inadequate ventilation; electrocution hazards result from overloaded electrical connections, work stations located close to exposed wires, and bare fuseboxes. The most recent data on the large number of fire code violations being discovered by the inspectors of the Garment Industry Task Force of the New York State Department of Labor suggest that sweatshop workers, including children, are at very high risk of dying in a fire if these conditions are not corrected.¹³

Hazards Of Child Labor

The hazards of child labor fall into two categories: (a) threats to education and development and (b) risks of injury and of illness due to toxic exposure.

Educational and developmental risks. One of the principal hazards of child labor is interference with school performance. Employed children risk having too little time for homework and being overtired on school days; teachers of children in areas where preholiday employment is common or industrial homework is escalating have reported declines in the academic performance of previously adequate students.

These children are described as falling asleep at their desks, and they are unable to learn.¹² Even if they maintain their academic standing, working children are able to participate less than their peers in afterschool activities and sports. Child labor also interferes with play, which is very important for normal

development throughout childhood, and relaxation and freedom from fatigue are necessary for children to grow and learn. Also, being in the workplace can increase the exposure of adolescents to drugs and alcohol.^{14,15}

Health risks.

Injuries. The leading cause of death in children older than one year, injuries account for 45% of all deaths of 5- to 14-year-old children in the United States. According to the most recent data available, from 1989, approximately 10,000 children die from injuries each year,¹⁶ and injuries are the leading cause of potential years of life lost in this country.¹⁷

Injuries associated with child labor appear to pose a significant public health problem.¹⁸ Data reported by the Centers for Disease Control and Prevention indicate that in 1993 child and adolescent workers in the United States sustained an estimated 21,620 injuries involving lost work days.¹⁸ The Bureau of Labor Statistics of the U.S. Department of Labor reports that each year between 1992 and 1995 an average of 180 work-related traumatic deaths

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occurred among working children and adolescents.¹⁹ The largest number of deaths were among young farmworkers. Workers in jobs in which they interacted with the public, such as retail sales clerks, also had high numbers of work-related fatalities; homicide accounted for over 70% of deaths in these occupations.¹⁸ Data from 1992 to 1995 collected by the National Electronic Injury Surveillance System indicate that 18- and 19-year old workers had the highest injury rates in the entire U.S. workforce, followed closely by 16- and 17-year old workers.¹⁹

Illustrating the importance of the workplace as a source of injury for children and adolescents, a recent review of adolescent visits to emergency rooms in Massachusetts found that of injuries that occurred in a known location, work accounted for 13.3% of all emergency visits for 14- to 17-year-olds and for 26.2% of visits among 17-year-olds.²⁰ The proportion of injuries related to work exceeded the pro-

portion related to sports. Important data tabulating injuries to working children have been reported through injury surveillance programs in Texas,²¹ Connecticut,²² Saskatchewan,²³ and North Carolina.²⁴

The fast food industry is among the fastest growing and largest sectors employing youth in the United States today. Lacerations and burns are common hazards in fast food establishments. There is also a risk of electrocution, although this may have been reduced by changes mandated subsequent to the death by electrocution in 1987 of a teenage worker in a hamburger restaurant; the source was a power outlet on a wet floor in an improperly grounded building.²⁵

The delivery of pizzas and other hot food items has proven to be extremely hazardous to working children. The rash promise made by one national pizza company that all pizzas would be delivered within 30 minutes of the time of

NIOSH Recommendations on Adolescent Labor

The following are a series of specific recommendations on adolescent labor developed by the National Institute for Occupational Safety and Health (NIOSH):²⁵

Employers. NIOSH recommends that employers take the following steps to protect adolescent workers:

- Know and comply with child labor laws and occupational safety and health regulations that apply to your business. Post these regulations for workers to read.
- Assess and eliminate the potential for injury or illness associated with tasks required of adolescents.
- Provide training to ensure that adolescents recognize hazards and are competent in safe work practices.
- Routinely verify that the adolescents continue to recognize hazards and employ safe work practices.
- Evaluate equipment that adolescents are required to operate to ensure that it is both legal and safe for use by adolescents.
- Ensure that adolescents are appropriately supervised to prevent injuries and hazardous exposures.
- Involve supervisors and experienced workers in developing an injury and illness prevention program and in identifying and solving safety and health problems.

Parents. Parents should take the following steps to protect adolescent workers:

- Take an active role in the employment decisions of your children.
- Discuss the types of work involved and the training and supervision provided by the employer.

Educators. Educators should take the following steps to protect adolescent workers:

- If you are responsible for signing work permits, know the state and Federal child labor laws.
- Talk to students about safety and health hazards in the workplace and students rights and responsibilities as workers.
- Ensure that school-based work experience programs (such as vocational education programs and School-to-Work programs) provide students with work experience in safe and healthful environments free of recognized hazards.
- Ensure that school-based work experience programs incorporate information about workers legal rights and responsibilities and occupational safety and health into high school and junior high curricula to prepare students for the world of work.

Children and adolescents. Adolescent workers should take the following steps to protect themselves:

- Be aware that you have the right to work in a safe and healthful work environment free of recognized hazards and that you have the right to refuse unsafe work tasks and conditions.
- Know that you have the right to file complaints with the U.S. Department of Labor when you feel your rights have been violated or your safety has been jeopardized.
- Remember that adolescent workers are entitled to workers compensation in the event of work injury or illness.
- Obtain information about your rights and responsibilities as workers from school counselors and state labor departments.
- Participate in any training programs offered by your employer, or request training if none is offered.
- Recognize the potential for injury at work and seek information about safe work practices from employers and state labor departments.
- Follow safe work practices.

placing an order has been shown to encourage reckless driving by young, often inexperienced motor vehicle operators.²⁶ A total of 20 fatalities within a single year among children working in pizza delivery and the people in the vehicle with which they collided were documented to be associated with the ill-conceived delivery policies of this firm.²⁶ Commercial driving is illegal under the age of 18 years.

In the years 1980 to 1987, workers compensation awards were made to 10,047 children under 18 years old in New York State for work-related injuries; 44% of these resulted in some degree of permanent disability. There were also 35 deaths.²⁷ These injuries and deaths occurred in a wide range of industries.

Risk of illness due to toxic exposure. Little information is available on the incidence or severity of illness caused in children by toxic occupational exposures. However, we do know that children are particularly sensitive to toxic substances and that they experience a variety of toxic exposures at work. These include formaldehyde and dyes in the garment industry, solvents in paint shops, organophosphate and other pesticides in agricultural as well as in lawn care jobs, asbestos in building abatement, and benzene in pumping unleaded gasoline. Given the wide occurrence of these exposures, it seems plausible that some still undefined portion of adolescent asthma cases might be related to occupational exposures to dusts or formaldehyde or that some cases of leukemia in children and adolescents may be the consequence of occupational exposure to benzene in unleaded gasoline. Noise exposure in adolescence may begin the sequence of destructive events in the auditory system that lead to noise-induced hearing loss in adult life.²⁸

Agricultural hazards. Rural children are employed extensively in agriculture, both on family farms and commercially. The hazards to health associated with agricultural work include lacerations, amputations, and crush injuries from farm machinery; blunt trauma from large animals; motor vehicle accidents involving farm vehicles on public roads; risk of suffocation in grain elevators and silos; and exposure to pesticides. Small physical size and inexperience may superimpose additional risk for young workers.

Although the number of children working in agriculture is not as large as in other sectors, the potential hazards (especially those involving machinery and large animals) coupled with the historical lack of regulation of agriculture combine to create an important problem, particularly in rural states. Agriculture has come to surpass mining as the most dangerous occupation.²⁹ Perhaps for this reason, much of the scanty literature available on work-related injury and illness in children focuses on agriculture.²⁹⁻³²

Prevention Strategies

Prevention of injury and illness in working children requires a variety of strategies:

Enforcement. Relaxation in the enforcement of Federal regulations protecting child workers along with a decrease in the number of inspectors and, consequently, a decrease in the number of inspections have contributed to the last decades resurgence of child labor abuses in the United States. Strong enforcement of existing legislation and regulations is necessary to protect the health and safety of working children and to support legitimate employers whose businesses are financially endangered by those who hire children under illegal working conditions.

Education. Working children and their parents, employers, and school authorities as well as physicians and other health care providers need to be educated about the hazards associated with child labor and about the relevant legal proscriptions. Education of child workers should attempt to temper their enthusiasm and lack of fear of workplace hazards. School authorities exercising their responsibilities under the work permit system and health care providers performing physical examinations of job applicants under age 18 have a unique opportunity to ensure that minors are not working in prohibited occupations or other unproscribed yet hazardous situations. Health care providers, particularly emergency room staff, need to remember that work can be a cause of injury and illness in childhood. The importance of an occupational history cannot be overemphasized. Finally, the business community must be educated on the hazards of child labor and reminded of its responsibilities under the law.

Surveillance. One of the major impediments to defining and resolving the problem of child labor in the United States is the lack of up-to-date descriptive data on the size and demographic characteristics of the population of working children. Data on the incidence of work-related injuries and illnesses in children are limited and fragmented due to a lack of both numerator and denominator data. Federal and state governments need to develop mechanisms for collecting these data more efficiently and for accessing other datasets that are potentially useful but currently only minimally available, such as information on work permits issued by local school boards. These data need to be published and publicized. Departments of health and labor at both the state and Federal levels need to work together and exchange data. Furthermore, Federal and state agencies should institute active surveillance of occupational injuries and illnesses in minors, using workers compensation claims, hospital visits, and other sources to identify sentinel health events for follow-up and preventive intervention. Active surveillance and epidemiological studies of work-related injury and illness in minors also will permit targeting of enforcement. They will facilitate evaluation of the effectiveness of current laws and may suggest possible modifications, such as additions to the list of proscribed occupations.

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